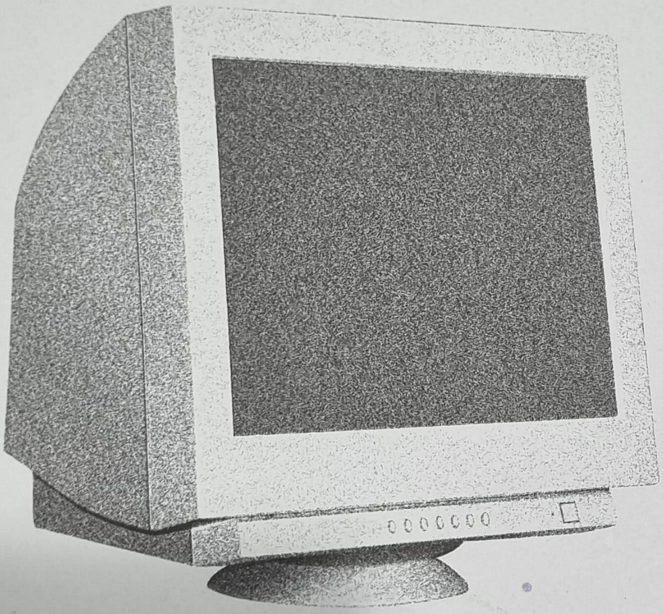
Gateway

COLOR DISPLAY MONITOR

VX1120

MODEL **VX1120**
USER'S GUIDE



For future reference, record the serial number of your display monitor in the space below:

SERIAL No. ☐

The serial number is located on the rear cover of the monitor.

RADIO INTERFERENCE REGULATIONS STATEMENT FOR U.S.A.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

THIS PRODUCT HAS BEEN TESTED AND FOUND TO COMPLY WITH THE LIMITS WITH SIGNAL CABLE SC-B110. USE IT TO REDUCE THE POSSIBILITY OF CAUSING INTERFERENCE TO RADIO, TELEVISION, AND OTHER ELECTRIC DEVICES. NO USER SERVICEABLE PARTS INSIDE. DO NOT ATTEMPT TO MODIFY THIS EQUIPMENT. IF MODIFIED, YOUR AUTHORITY TO OPERATE THIS EQUIPMENT MIGHT BE VOIDED BY FCC.

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取扱説明書に従って正しい取り扱いをしてください。

Declaration of Conformity

We, the Responsible Party

Gateway Companies Inc.
610 Gateway Drive
North Sioux City, SD 57049

Declare that this product

Is in conformity with part 15 of the FCC rules. Operation of this product is subject to the following two conditions; (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause

As an ENERGY STAR Partner, Gateway Companies Inc. has determined that this product meets the ENERGY STAR guidelines for energy efficiency.

Canadian users

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus as set out in the radio interference regulations of Industry Canada.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de Class B prescrites dans le règlement sur le brouillage radioélectrique édicté par Industrie Canada.

Australia and New Zealand users

This device has been tested and found to comply with the limits for a Class B digital device pursuant t the Australian / New Zealand standard AS/NZS 3548 set out by the Australian Communications Authority and Radio Spectrum Management Agenc

CAUTION

The power cord provided with this monitor is designed for safety and must be used with a properly grounded outlet to avoid possible electrical shock.

Do not remove the monitor cabinet as this can expose you to very high voltages and other hazards.

MANUFACTURER DECLARATION FOR CE-MARKING:
We, Gateway Companies Inc. declare under our sole responsibility, that this product is in conformity with the following standards:
EN60950
EN55022 Class B
EN61000-3-2
EN61000-3-3
EN55024
following the provisions of:
73/23/EEC Low Voltage Directive
89/336/EEC EMC Directive

WARNING!

This product is not designed for use in life support devices and Gateway Companies Inc. makes no representations to the contrary. Life support devices are those devices which are used to measure, diagnose, or evaluate the tissue, systems or functions of the human body; or other devices employed to support or sustain life or good health.

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1 INTRODUCTION

Congratulations on your purchase of the high resolution color monitor. We designed this monitor to provide you with years of reliable trouble-free operation.

This guide tells you how to connect, adjust and care for your monitor. This guide also provides technical specifications and instructions for troubleshooting any basic problems you may experience with your monitor.

1.1 Features

This monitor is a 55cm/22" (508mm/20" Viewable Image Size) intelligent, microprocessor-based monitor compatible with most analog RGB (Red, Green, Blue) display standards.

It provides crisp text and vivid color graphics with PC platforms.

- The monitor's wide auto-scanning compatibility range makes it possible to upgrade video cards or software without purchasing a new monitor.
- Digitally controlled auto-scanning is done using an internal microprocessor, for horizontal scan frequencies between 30kHz and 130kHz, and vertical scan frequencies between 50Hz and 160Hz. The microprocessor-based intelligence allows the monitor to operate in each frequency mode with the precision of a fixed frequency monitor.
- The monitor contains resident memory for pre-programmed screen display standards and is also capable of storing additional user adjustment parameters.
- The monitor has "AUTO SIZE ADJUST" function to optimize the size and distortion for Non-Preset timings.
- The monitor is capable of producing a non-interlaced maximum addressable resolution format of 2048 dots x 1536 lines. This display is well suited for windowing environments.
- Because of the analog signal inputs, the monitor can display an unlimited palette of colors that can be manually adjusted to suit your specific needs.
- The monitor has a power management function accorded to VESA™-DPMS™-standard. To save energy, the monitor must be connected to a system compliant with the VESA™-DPMS™-standard. (Refer to your computer and/or video card instructions for proper operation.)
- To ensure ease of installation and ongoing use, the monitor features On Screen Display (OSD) of all monitor set-up and adjustment functions.
- For use in a variety of applications, the monitor complies with UL 1950, CSA C22.2 No.950 and EN60950 for safety, FCC Class-B, VCCI Class-B, EN55022 Class-B and AS/NZS 3548 (for Australia/New Zealand use only) for EMI, MPR-II, ISO 9241-3, ISO9241-7 and ISO9241-8 for ergonomics. The monitor also complies with TCO'99 guideline for environmental safe use.
- The world's standard DIAMONDTRON® NF CRT upgraded and pure picture images.
- The monitor complies with Video Electronics Standards Association (VESA™) DDC™2B and 2Bi (EDID) specification. If your computer is Plug & Play compliant setup will be done automatically.
- Fine 0.24mm aparture grille pitch/Maximum addressable resolution of 2048 x 1536.
- USB self-powered hub with 1 upstream port and 3downstream ports.

1.2 Internal Preset Memory Capability

To minimize adjustment needs, the factory has preset popular display standards into the monitor, as shown in Table 1. If any of these display standards are detected, the picture size and position are automatically adjusted. All of the factory presets may be overwritten by adjusting the user controls. This monitor is capable of automatically storing up to 15 additional display standards. The new display information must differ from any of the existing display standards by at least 1kHz for the horizontal scan frequency or 1Hz for the vertical scan frequency or the sync signal polarities must be different.

Table 1. Memory Buffer Factory Presets

PRESET TIMING	Fh(kHz)	Fv (Hz)	Polarity	
			H	V
640 x 480 N.I.	31.5	59.9	–	–
640 x 480 N.I.	37.5	75.0	–	–
720 x 400 N.I.	31.5	70.0	–	+
800 x 600 N.I.	37.9	60.3	+	+
800 x 600 N.I.	46.9	75.0	+	+
1024 x 768 N.I.	48.4	60.0	–	–
1024 x 768 N.I.	60.0	75.0	+	+
1280 x 1024 N.I.	80.0	75.0	+	+
1600 x 1200 N.I.	93.8	75.0	+	+

1.3 Power Management Function

The monitor has a power management function which reduces the power consumption of the monitor when not in use.
Power saving mode is invoked by a VESA™ DPMS™ compliant computer. Check your computer's manual for setting this function.

Mode	Power	Power-On Indicator
Normal	140 W	Green
Power Saving Mode	≦3 W	Orange

NOTE without USB operation

1.4 DDC

The monitor includes the VESA™ DDC™2B and DDC™2Bi feature. DDC (Display Data Channel) is a communication channel over which the monitor automatically informs the computer system about its capabilities (e.g. each supported resolution with its corresponding timing).
DDC is routed through previously unused pins of the 15-pin VGA connector.
The system will "Plug and Play" if both monitor and computer implement the DDC protocol.

NOTE
DDC™2Bi is available only with connector SIGNAL-B.

1.5 Location Considerations

When setting up and using the monitor, keep the following in mind:

- For optimum viewing, avoid placing the monitor against a bright background or where sunlight or other light sources may reflect on the display area of the monitor. Place the monitor just below eye level.
- Place the monitor away from strong magnetic or electromagnetic fields, such as high capacity transformers, electric motors, large current power lines, steel pillars, etc....

  Magnetism can cause distortion in the picture and/or color purity.
- Avoid covering the slots or openings of the monitor. Allow adequate ventilation around the monitor so the heat from the monitor can properly dissipate. Avoid putting the monitor into any enclosure that does not have adequate ventilation.
- Avoid exposing the monitor to rain, excessive moisture, or dust, as this can cause a fire or shock hazard.
- Avoid placing the monitor, or any other heavy object, on the power cord. Damage to the power cord can cause a fire or electrical shock.
- When transporting the monitor, handle it with care.

1.6 Cleaning Your Monitor

When cleaning the monitor, please follow these guidelines:

- Always unplug the monitor before cleaning.
- Wipe the screen and cabinet front and sides with a soft unspoil cloth to prevent causing imperfections.
- If the screen requires more than dusting, apply water or neutral detergent to a soft cloth to clean the monitor screen.

CAUTION

- *Do not use benzene, thinner or any volatile sub stances to clean the unit as the finish may b permanently marked.*
- *Never leave the monitor in contact with rubber vinyl for an extended time period.*
- *Do not spray directly on the screen as cleaner m drip into the monitor and damage the circuitry.*
- *Never use an abrasive cleaner on the screen face as this will damage the anti-reflection coa*

1.7 Unpacking

After you unpack the box you should have all of the items indicated in Figure 1. Save the box and packing materials in case you transport the monitor.

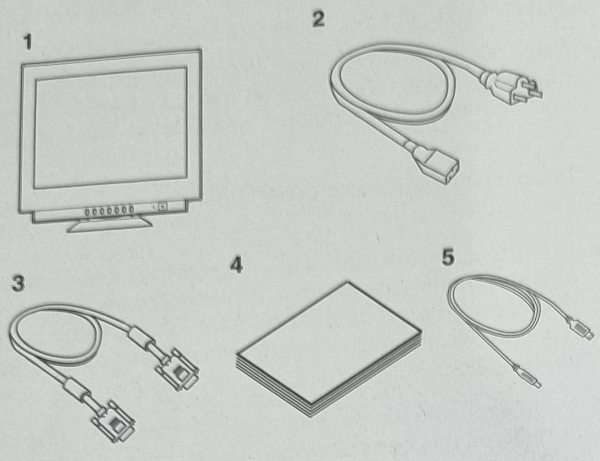


Figure 1

1. Color Monitor
2. AC Power Cord
3. Signal Cable SC-B110
4. User's Guide (this document)
5. USB Upstream Cable

1.8 Tilt/Swivel Base

The monitor comes with a tilt/swivel base. This enables you to position the monitor at the best angle and tilt for maximum viewing comfort.

Screen Position Adjustment

Adjust the tilt and rotation of the monitor by placing your hands at opposite sides of the case. You can adjust the monitor 90 degrees right or left, 10 degrees up or 5 degrees down, as shown below.

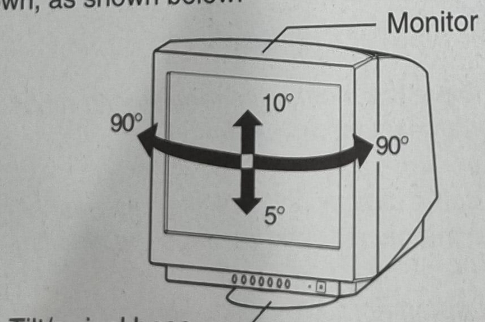


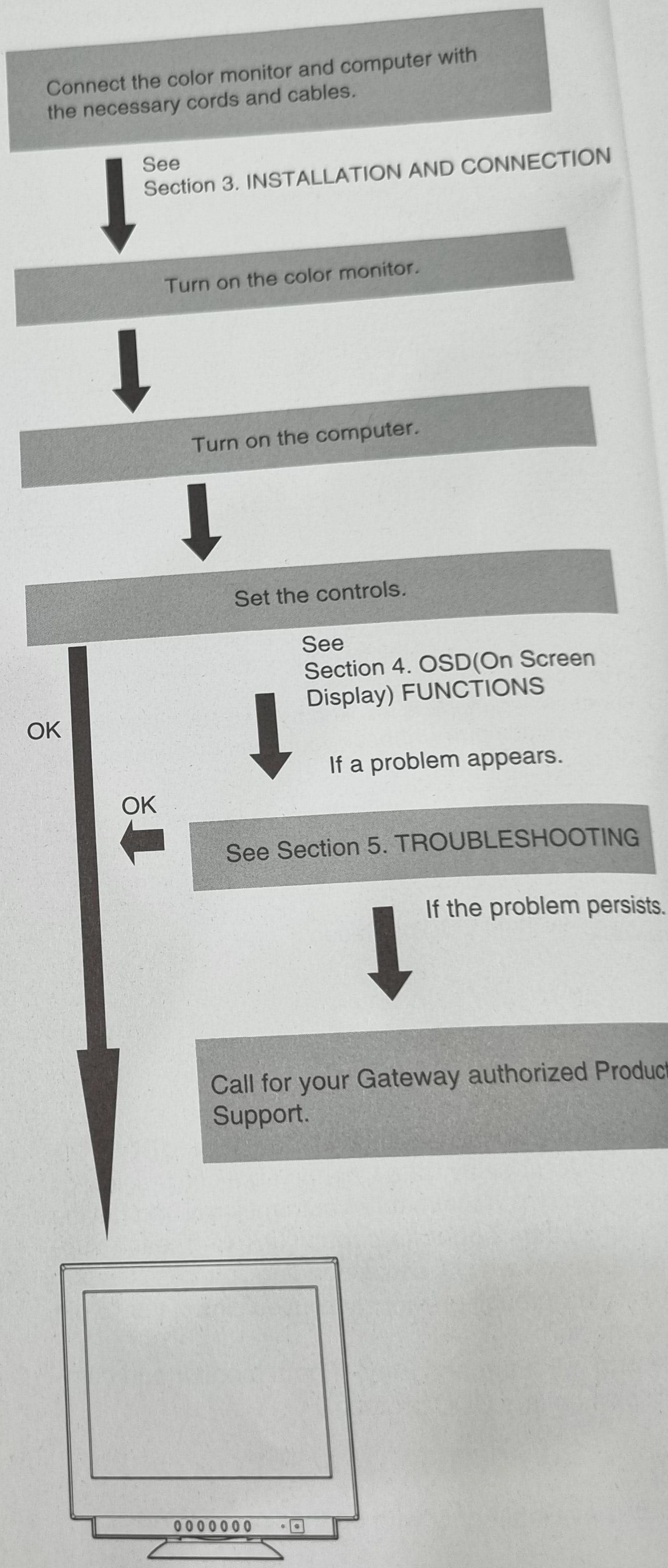
Figure 2

CAUTION

Keep your fingers away from the pivot area of the tilt/swivel base.

1.9 Quick Operation Chart

To summarize the steps in connecting your computer with the color monitor and setting the necessary controls and switches, refer to the chart below.


Connect the color monitor and computer with the necessary cords and cables.
See Section 3. INSTALLATION AND CONNECTION
Turn on the color monitor.
Turn on the computer.
Set the controls.
See Section 4. OSD(On Screen Display) FUNCTIONS
OK
If a problem appears.
OK
See Section 5. TROUBLESHOOTING
If the problem persists.
Call for your Gateway authorized Product Support.

2 PART NAME

2.1 Control Names

See Figures 3 and 4 for the location of the user controls, indicator and connectors. Each part is identified by number and is described individually.

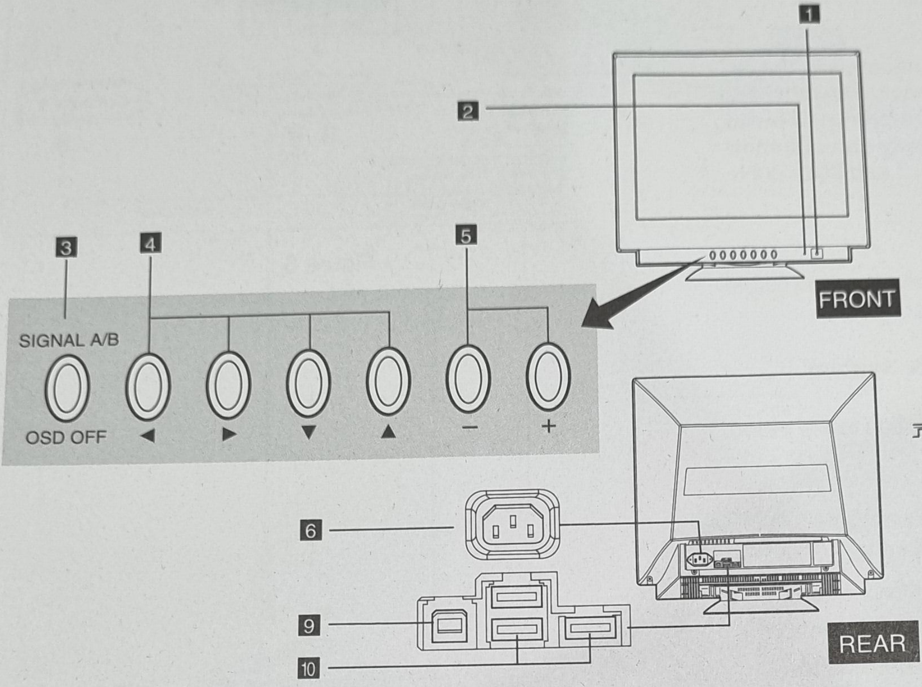


Figure 3

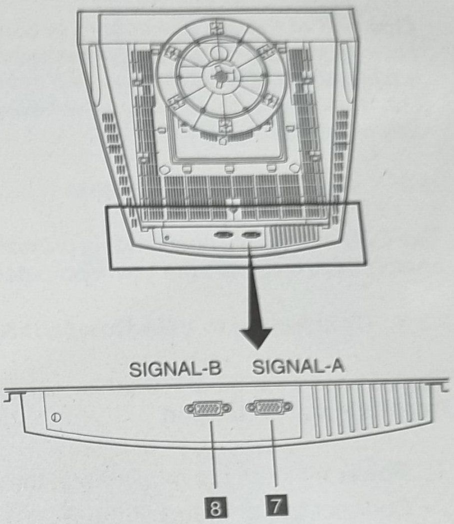


Figure 4

2.2 Function

1. **POWER SWITCH:** A push-on / push-off switch for AC power.
2. **POWER-ON INDICATOR:** This indicator illuminates green when AC power is on, and illuminates orange when the monitor is in the power management modes.
3. **INPUT CONNECTOR SELECT/OSD OFF BUTTON:**
   - Without OSD screen, push to select the signal input connector, SIGNAL A or B.
   - With OSD screen, push to turn the OSD screen off.

NOTE

If only one input is used, the monitor will select it automatically.

4. **ITEM SELECT BUTTONS:** Push to select the item icon.
5. **FUNCTION ADJUST BUTTONS:** Push the adjust buttons to adjust the image on the screen.
6. **AC POWER CONNECTOR**
7. **SIGNAL INPUT CONNECTOR (SIGNAL-A):DB9-15P**
8. **SIGNAL INPUT CONNECTOR (SIGNAL-B):DB9-15P**
9. **USB UPSTREAM PORT:** To connect to USB equipped computer.
10. **USB DOWNSTREAM PORTS:** To connect to USB equipped peripherals, e.g, USB cameras, keyboards, printers, etc.

3 INSTALLATION AND CONNECTION

On the back of the monitor three kinds of plug-in connections are provided: AC power connector for the AC input, two DB9-15P connectors for video signal input, and USB ports for USB communication.

3.1 AC Power Connection

One end of the AC power cord is connected to the AC power connector on the back of the monitor. The other end is plugged into a properly grounded three-prong AC outlet. The monitor's auto-sensing power supply can automatically detect 100-120V AC or 220-240V AC and 50 or 60Hz.

3.2 Signal Cable Connection

The DB9-15P(VGA) connector is provided for compatible analog RGB outputs from your computer.

3.2.1 Connecting to VGA Compatible System

Figure 5 shows the SC-B110 cable connection to the Video Graphics Array (VGA) port.

1. Power off, both the monitor and the computer.
2. Connect the one end of the SC-B110 cable to the DB9-15P connector on the VGA controller card.
3. Connect the other end of the SC-B110 cable to the DB9-15P receptacle on the back of the monitor.
4. Power on the monitor, then the computer.
5. After using the system, power off the monitor, then the computer.

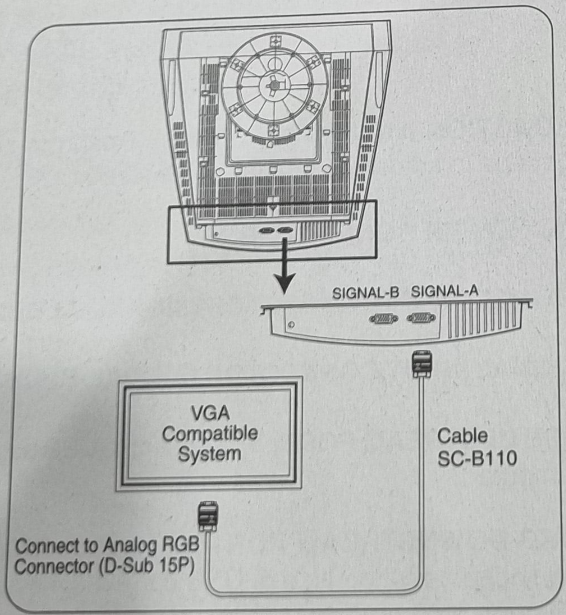


Figure 5

CAUTION

The socket-outlet shall be installed near the equipment and shall be easily accessible. During servicing, disconnect the plug from the socket-outlet.

3.2.2 Connecting to Two Computers

Figure 6 shows the connection to two computers. Refer to clause 3.2.1 for the connection procedure.

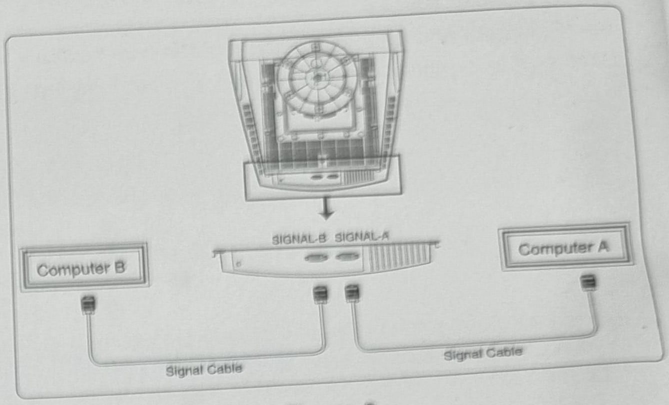
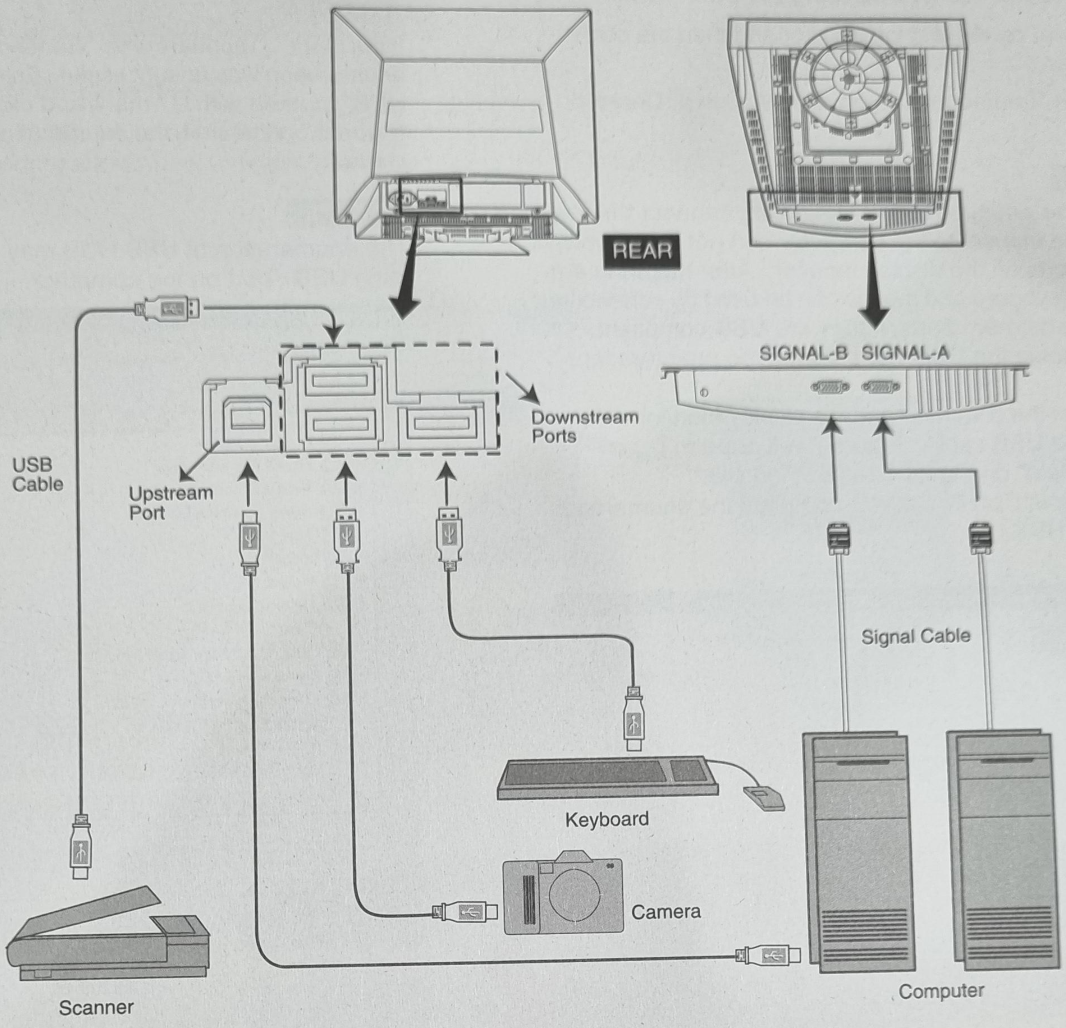


Figure 6

3.3 USB System Basic Application



NOTE The Computer is required to have Windows® 98 or later installed and USB functions.

3.4 Installation of USB Function

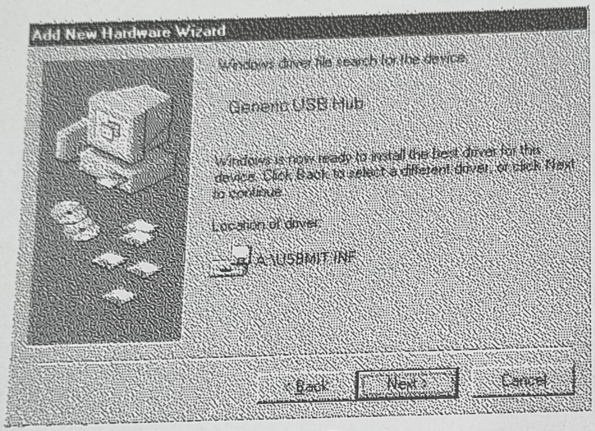
The following procedure permits your computer to recognize or "enumerate"(A USB term) the USB HUB.

1. Power on the display monitor and then the computer.
2. Start "Enumeration" from the Windows® Desktop.

NOTE

- During the enumeration of USB Hub, connect the keyboard and mouse, to the computer and not to the downstream ports on the display monitor. After the enumeration, the keyboard and mouse can be used by connecting to the downstream ports, if they are USB-compliant.
- Do not unplug the USB cable during the enumerations.

(1) Connect the computer and the display monitor with the included USB cable. Figure 7 will appear.
(2) Click "Next" on Figure 7 to get Figure 8.
(3) Click "Finish" on Figure 8 to complete the enumeration of USB HUB.



Windows driver file search for the device:

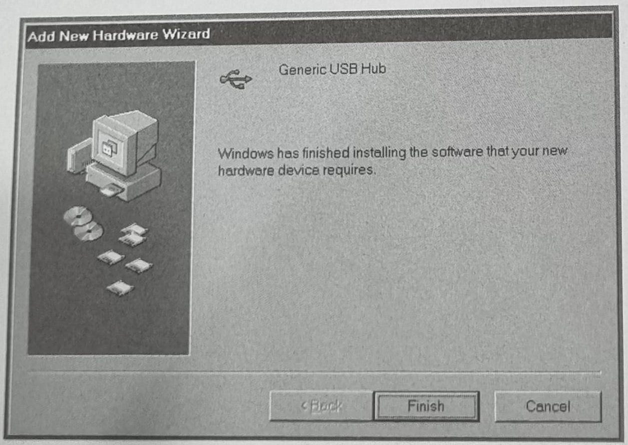
Generic USB Hub

Windows is now ready to install the best driver for this device. Click Back to select a different driver, or click Next to continue.

Location of driver:

A:\USBMIT.INF

Figure 7



Generic USB Hub

Windows has finished installing the software that your new hardware device requires.

Figure 8

You can confirm that the USB HUB is successfully enumerated with the following method.

- Open "Device Manager" tab in "System" property under "Control Panel". Confirm that "Generic USB HUB" is listed in "Universal Serial Bus Controller". If you can't confirm it, re-enumerate the USB HUB again by following (a) or (b).

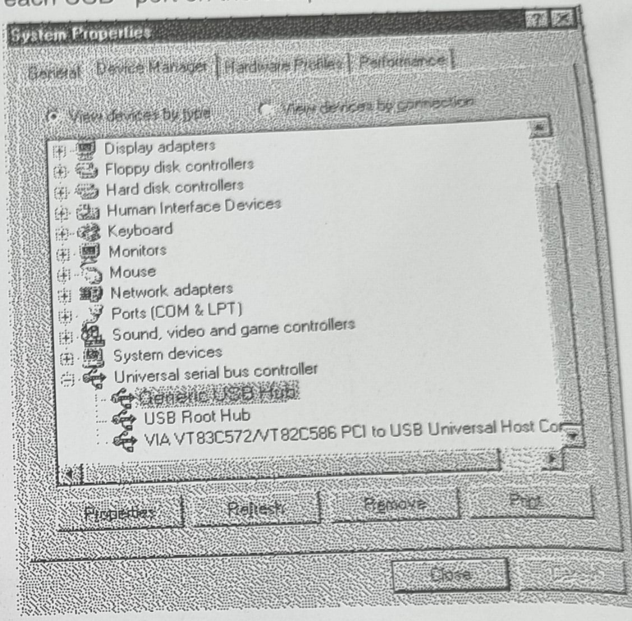
(a) Disconnect and connect the USB cable to the upstream port of the display monitor.
(b) Cycle power of the display monitor off then on.

NOTE

If the mark (!) appears with "Generic USB HUB", then enumeration was unsuccessful. Select "Generic USB HUB" marked with (!) mark and click "Remove" and "Refresh". After that, the enumeration is automatically started.

NOTE

The enumeration of USB HUB may be necessary for each USB port on the computer.



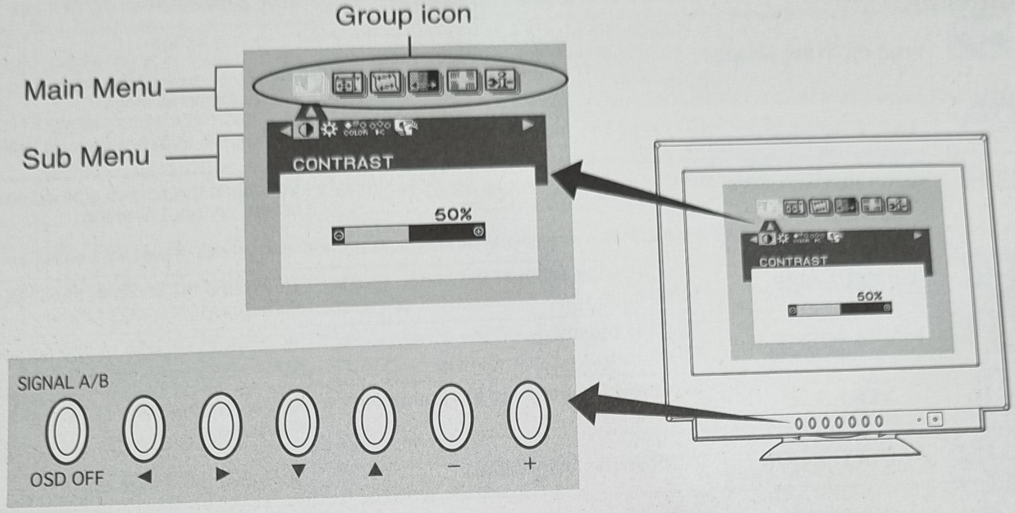
Display adapters
Floppy disk controllers
Hard disk controllers
Human Interface Devices
Keyboard
Monitors
Mouse
Network adapters
Ports (COM & LPT)
Sound, video and game controllers
System devices
Universal serial bus controller
  Generic USB Hub
  USB Root Hub
  VIA VT83C572/VT82C586 PCI to USB Universal Host Co

Figure 9

4 OSD (On Screen Display) FUNCTIONS

4.1 How to adjust the screen

The monitor has an OSD(On Screen Display) function.
The following procedure shows how to adjust the screen using the OSD function.



(1) Turn on the monitor by pressing ⊙

(2) Display the OSD screen by pressing ◄ ► ▼ ▲ − +

(3) Select the group icon on Main Menu by pressing ◄ ►

(4) Display the Sub Menu by pressing ▼

(5) Select the item icon on Sub Menu by pressing ◄ ►

(6) Adjust by pressing − +

(7) To turn the OSD screen off, press button SIGNAL A/B OSD OFF

If you don't press any button for the time set at "OSD TURN OFF", the OSD will turn off automatically.

X: Available

4.2 Adjustment Items

Group Icon	Item Icon	Item	Press the Minus Button	Press the Plus Button	A	B	C
(COLOR)		CONTRAST	To decrease the contrast.	To increase the contrast.	X	X	X
		BRIGHT	To decrease the brightness.	To increase the brightness.	X	X	X
	COLOR	COLOR	To select preferable display color mode. And, to adjust the color balance at the selected color mode.		X	X	X
		NOTE When selecting mode "sRGB", "COLOR TEMPERATURE", "CONTRAST" and "BRIGHT" are unavailable.					
	K	COLOR TEMPERATURE	To decrease the color temperature of the color mode selected by "COLOR"	To indecrease the color temperature of the color mode selected by "COLOR"	X	X	X
		FINE PICTURE MODE	Selects the status which provides the most pleasing image. NORMAL MODE - - - for normal use TEXT MEDE - - - - for image using many letters or characters GRAPHIC MODE - - for graphic and photographic images.		X		
		FACTORY PRESET	————	To restore to factory preset level.	-	-	-
(GEOMETRY)	AUTO	AUTO SIZE ADJUST	————	To adjust the screen size automatically based on input timming.	-	-	-
		NOTE "AUTO SIZE ADJUST" is unavailable when no image signal or narrow size of the image signal are inputted.					
		HORIZ-SIZE	To narrow the width of the image on the screen.	To expand the width of the image on the screen.	X	X	
		HORIZ-POSITION	To move the image on the screen to the left.	To move the image on the screen to the right.	X	X	
		VERT-SIZE	To narrow the height of the image on the screen.	To expand the height of the image on the screen.	X	X	
		VERT-POSITION	To move the image down.	To move the image up.	X	X	
		ROTATION	To rotate the image counterclockwise.	To rotate the image clockwise.	X	X	X
	GTF AUTO	GTF AUTO ADJUST	————	To adjust the screen size automatically based on GTF timming.	-	-	-
		NOTE "GTF AUTO ADJUST" is available when using with the computer which VESA GTF™ function is installed.					
		FACTORY PRESET	————	To restore to factory preset level.	-	-	-
		NOTE If a non-Factory Preset timing is used, "FACTORY PRESET" is unavailable.					
(DISTORTION)		PINCUSHION	To collapse the center of the image.	To expand the center of the image.	X	X	
		PIN-BALANCE	To move the top and bottom of the screen image to the right.	To move the top and bottom of the screen image to the left.	X	X	
		KEYSTONE	To decrease the width at the top of the screen image and to increase the width at the bottom.	To increase the width at the top of the screen image and to decrease the width at the bottom.	X	X	
		KEY-BALANCE	To make the screen slant to the left.	To make the screen slant to the right.	X	X	
		TOP-PIN	To expand the width of the screen image near the corners of top.	To narrow the width of the screen image near the corners of top.	X	X	
		TOP-BALANCE	To make the screen slant to the left at the top.	To make the screen slant to the right at the top.	X	X	
		BOTTOM-PIN	To expand the width of the screen image near the corners of bottom.	To narrow the width of the screen image near the corners of bottom.	X	X	
		BOTTOM-BALANCE	To make the screen slant to the left at the bottom.	To make the screen slant to the right at the bottom.	X	X	
		VERT-LIN	To vertically compress the center of the screen and expand the top and bottom.	To vertically expand the center of the screen and compress the top and bottom.	X	X	
		VERT-LIN-BALANCE	To vertically expand the bottom of the screen and compress the top.	To vertically compress the bottom of the screen and expand the top.	X	X	
		FACTORY PRESET	————	To restore to factory preset level.	-		
		NOTE If a non-Factory Preset timing is used, "FACTORY PRESET" is unavailable.					

A. Press "FACTORY PRESET" to restore to the factory preset level.
B. Press ◯ and ◯ buttons together, to restore to the factory preset level.
C. Set data does not change by the change of the signal timing.

X: Available

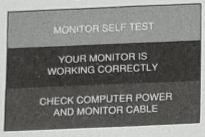
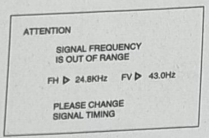
Group Icon	Item Icon	Item	Press the Minus Button	Press the Plus Button	A	B	C
(PURITY)		CORNER PURITY(TL)	To adjust the purity condition on the top-left corner.		X	X	X
		CORNER PURITY(TR)	To adjust the purity condition on the top-right corner.		X	X	X
		CORNER PURITY(BL)	To adjust the purity condition on the bottom-left corner.		X	X	X
		CORNER PURITY(BR)	To adjust the purity condition on the bottom-right corner.		X	X	X
		MOIRE CANCEL LEVEL	To decrease the level of the moire-clear wave.		X	X	
	CLAMP	CLAMP PULSE POSITION	To eliminate an excessive green or white-back ground that may occur when both Sync-On green and external sync signals are applied to the monitor. To clamp the video signal at the front of the H-Sync pulse.	To clamp the video signal at the back of the H-Sync pulse.	X		
		FACTORY PRESET	————	To restore to factory preset level.	-	-	-
(CONVER.)		HORIZ-CONVERGENCE	To adjust the horizontal beam alignment on the full screen area.		X	X	X
		VERT-CONVERGENCE	To adjust the vertical beam alignment on the full screen area.		X	X	X
		FACTORY PRESET	————	To restore to factory preset level.	-	-	-
(MISC.)		DEGAUSS	————	To eliminate possible color shading or impurity due to magnetic effects.	-	-	-
		INPUT	To select the signal input connector, SIGNAL A or B.				
		POWER SAVE	To select the constant power consumption mode.	To select the power-save mode. (Your computer must be set for power management.)	X		X
		CONTROL LOCK	To unlock the OSD adjustments.	To lock the OSD function except for "BRIGHT" and "CONTRAST".			X
			NOTE "BRIGHT" and "CONTRAST" are available at the locked condition.				
		OSD POSITION	To move the OSD screen position in a counter clockwise direction.	To move the OSD screen position in a clockwise direction.	X		X
	OFF	OSD TURN OFF	To adjust the time that the OSD screen disappear when no access.		X	X	X
	INFO	DIAGNOSIS	Indicates the current scanning frequency, factory or user preset timing number, and signal iput connector.		-	-	-
		LANGUAGE	To choose the language used on OSD. ENG.....English, GER.....German, FRA.....French, ESP.....Spanish, ITA ..... Italian, 日本語 .....Japanese				X
	AUTO SAVE	AUTO SAVE	To save the new setting automatically.	To save the new setting with a comfirmation message.			X
			NOTE When selecting "OFF", if "SAVE" is not done before the OSD screen disappeared, the new setting is invalid.				
	ALL RESET	ALL RESET	————	Restores all items to the factory preset level.	-	-	-
		FACTORY PRESET	————	To restore to factory preset level.	-	-	-

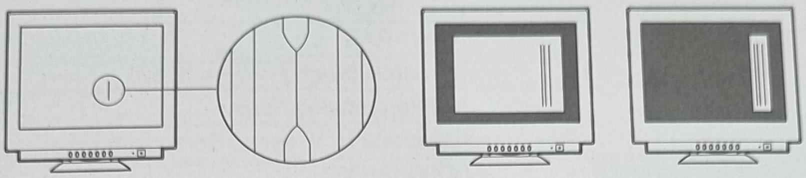
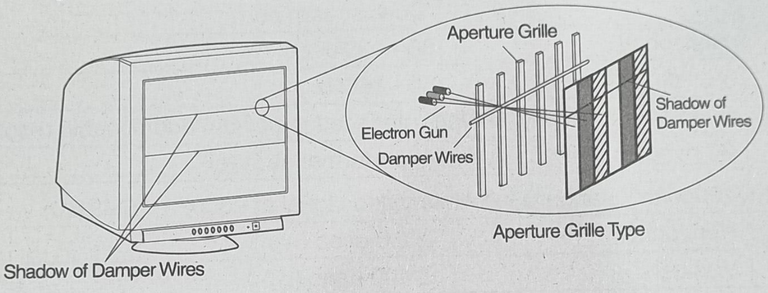
NOTE

If a non-Factory Preset timing is used, "FACTORY PRESET" does not work.

5 TROUBLESHOOTING

Before calling your Authorized Product Support, please check that the items below are properly connected or set. In case of using a non-standard signal, please check the pin assignments and the signal timing of your computer with the specification outlined in Section 6. SPECIFICATIONS and Section 7. APPENDIX.

PROBLEM		ITEMS TO CHECK	LOCATION
No picture	LED On (Green)	• Contrast and brightness controls.	• Front
	LED Off	• Power switch. • AC power cord disconnected.	• Front • Rear
	LED On (Orange)	• Signal cable disconnected. • Computer power switch. • Power management function is active.	• Rear • Computer • Press any key on the keyboard or move the mouse.
The following message appeared.  MONITOR SELF TEST YOUR MONITOR IS WORKING CORRECTLY CHECK COMPUTER POWER AND MONITOR CABLE		• Signal cable disconnected. • Computer power switch. • Power management function is active.	• Rear • Computer • Press any key on the keyboard or move the mouse.
The following message appeared.  ATTENTION SIGNAL FREQUENCY IS OUT OF RANGE FH ▷ 24.8KHz FV ▷ 43.0Hz PLEASE CHANGE SIGNAL TIMING		• Input signal frequency range is too high or too low for the monitor to synchronize with.	• Check the specification of graphics adapter
Abnormal picture	Display is missing, center shifts, or too small or too large of a display size	• Do "FACTORY PRESET" or "ALL RESET" for a standard signal. • Adjust HORIZ-SIZE, VERT-SIZE, HORIZ-POSITION, and VERT-POSITION with non-standard signals. • Monitor may not be able to get full-screen image depend on signal. In this case, please select other resolution, or other vertical refresh timing. • Make sure you wait a few seconds after adjusting the size of the image before changing or disconnecting the signal.	• Front (OSD) • Front (OSD)
No operation of the USB devices		• [Universal serial bus controller] is not listed in [Device Manager].	• Confirm that Windows®98 or later version is installed into the computer.
		• [Generic USB HUB] is not listed in [Device Manager].	• Make sure of the cable connections. • Restart the computer. • Turn off the monitor and turn on then. • Disconnect all the cables connected to the Upstream ports and re-connect then.

	PROBLEM	ITEMS TO CHECK	LOCATION
Abnormal Picture	Black vertical lines are visible on the screen.	Thin vertical black lines on one or both sides of the screen. This minor condition is caused by grille element overlap which can occur during shipping. Position an open white window over the affected area of the screen and maximize the brightness and contrast controls. This will cause localized heating of the overlap which will clear in a few minutes. Be sure to readjust the brightness and contrast controls back to the normal viewing levels after this procedure. 	
	Two fine horizontal lines are visible on the screen.	• The 2 very faint thin lines across the screen are normal. They are caused by the aperture grille stabilization filaments(Damper Wires) which are required for all aperture grille CRTs'.  Aperture Grille Shadow of Damper Wires Electron Gun Damper Wires Aperture Grille Type Shadow of Damper Wires	
	A buzzing sound when power on.	• A brief vibration or hum sound that is heard just after power up is normal. This is caused by the automatic degaussing function. This sound will be heard each time the monitor is powered up from a cold start and each time the manual degauss button is used.	

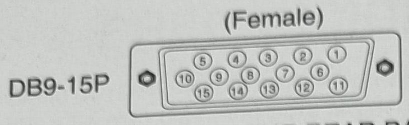
6 SPECIFICATIONS

CRT	Size	55cm/22" (508mm/20" Viewable Image Size)
	Mask type	Aperture grille
	Gun	In-line
	Deflection angle	90°
	Phosphors	Red, Green, Blue EBU (medium short persistence)
	Aperture grille pitch	0.24mm
	Phosphor pitch	0.25mm
	Face Plate	G-WARAS
	Focusing method	Dynamic Beam Forming (DBF)
INPUT SIGNAL	Video	0.7Vp-p analog RGB
	Sync	Separate H, V sync., Composite sync., or Sync on Green
SIGNAL INTERFACE	Input Connectors	DB9-15P X 2
	Input Impedance	75Ω (video), 2.2kΩ (sync.)
USB	Function	Self-powered HUB complying with Universal Serial Bus Specification Rev.1.1
	Interface	•1 Upstream port/12Mbps •3 Downstream ports/12Mbps, 1.5 Mbps (500mA max. per each Downstream port)
SCANNING FREQUENCY	Horizontal	30 - 130kHz
	Vertical	50 - 160Hz
RESOLUTION (HxV)	2048 dots x 1536 lines Non-Interlaced maximum addressable resolution format at 80Hz	
WARM-UP TIME	30 minutes to reach optimum performance level	
BRIGHTNESS	100cd/m^2, standard full white video signal at 9300K (+ 8MPCD)	
BLANKING TIME	Horizontal	≧2.0 μsec (typ.)
	Vertical	≧400 μsec (typ.)
DISPLAY SIZE	396mm x 297mm(typ.) ratio 4:3 (371mm x 297mm(typ.) ratio 5:4)	
COLOR	5000K~9300K	
POWER SOURCE	AC100-120/220-240V±10% 50/60Hz 140W (typ.) (155W (typ.) with USB operation)	
OPERATING ENVIRONMENT	Temperature	5 - 35°C
	Humidity	10 - 90%RH (without condensation)
DIMENSIONS	(W)19.5inch x (H)19.4inch x (D)18.6inch / (W) 495mm x (H) 493.5mm x (D) 473mm	
WEIGHT	29.7kg (65.5 lbs.)	
TILT/SWIVEL BASE	Tilt Angle	-5° - +10°
	Swivel Angle	±90°
REGULATIONS	Safety	UL1950 (UL), CSA C22.2 No.950 (C-UL) EN60950 (TÜV-GS)
	EMC	FCC Class-B, DOC Class-B EN55022 Class-B, VCCI Class-B, AS/NZS 3548 (for Australi New Zealand use only) EN61000-3-2, EN61000-3-3, EN55024
	X-Ray	DHHS, HWC, Röv vom 8.1, 1987
	Other	CE-Marking, MPR-II/TCO'91 ISO9241-3, ISO9241-7, ISO9241-8 (TÜV-GS) TCO '99 International ENERGY STAR Program

* This monitor is registered / certified with Model No. VX1120A.

7 APPENDIX

7.1 Monitor Signal Input Connector (DB9-15P)



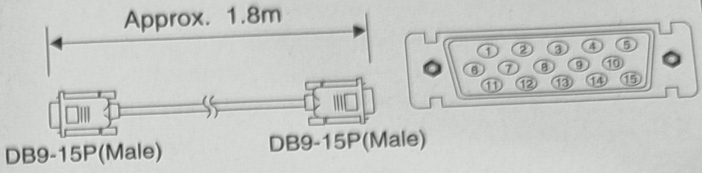
MOUNTED ON THE REAR PANEL

PIN ASSIGNMENTS

Pin No.	Signal
1	RED VIDEO
2	GREEN VIDEO
3	BLUE VIDEO
4	GROUND
5	DDC GROUND
6	RED GROUND
7	GREEN GROUND
8	BLUE GROUND
9	5V (from Host Computer)
10	SYNC GROUND
11	GROUND
12	SDA
13	HORIZONTAL SYNC or COMPOSITE SYNC
14	VERTICAL SYNC(VCLK)
15	SCL

DDC .... DISPLAY DATA CHANNEL
SDA .... SERIAL DATA
SCL .... SERIAL CLOCK

7.2 SC-B110 Signal Cable



PIN ASSIGNMENTS

Pin No.	Signal
1	RED VIDEO
2	GREEN VIDEO
3	BLUE VIDEO
4	GROUND
5	DDC GROUND
6	RED GROUND
7	GREEN GROUND
8	BLUE GROUND
9	5V (from Host Computer)
10	SYNC GROUND
11	GROUND
12	SDA
13	HORIZONTAL SYNC or COMPOSITE SYNC
14	VERTICAL SYNC(VCLK)
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DDC .... DISPLAY DATA CHANNEL
SDA .... SERIAL DATA
SCL .... SERIAL CLOCK